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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/599,270	09/25/2006	Martijn Henri Richard Lankhorst	NL04 0358 US1	6402
65913	7590	06/03/2011	EXAMINER	
NXP, B.V.			LEE, EUGENE	
NXP INTELLECTUAL PROPERTY & LICENSING				
M/S41-SJ			ART UNIT	PAPER NUMBER
1109 MCKAY DRIVE			2815	
SAN JOSE, CA 95131				
NOTIFICATION DATE		DELIVERY MODE		
06/03/2011		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ip.department.us@nxp.com

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/599,270	LANKHORST ET AL.
	<b>Examiner</b>	<b>Art Unit</b>
	EUGENE LEE	2815

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 01 March 2011.  
 2a) This action is **FINAL**.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-21 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) 19-21 is/are allowed.  
 6) Claim(s) 1-6,9,13,14,15 and 17 is/are rejected.  
 7) Claim(s) 7,8,10-12,16 and 18 is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ .                                    |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____.   | 6) <input type="checkbox"/> Other: _____ .                        |

## **DETAILED ACTION**

In view of the arguments presented in the Supplemental Appeal Brief filed 3/1/11, the previous rejection is withdrawn and the following rejection is now pending.

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 thru 6, 13, 14, 15, 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Czubatyj et al. 5,825,046. Czubatyj discloses (see, for example, FIG. 1) a memory element comprising a composite memory material (layer of a phase change material) 36. In claim 2, Czubatyj discloses the memory material being made of Te, Ge, Sb and other mixtures. In column 14, lines 23-34, Czubatyj discloses a dynamic range of resistances wherein multiple bits of binary information to be stored in a single memory cell, i.e. n bits of binary information.

Regarding claim 2, see, for example, FIG -4 wherein Czubatyj discloses an addressing matrix 52 including signal generating means.

Regarding claim 3, see, for example, FIG -3 wherein Czubatyj discloses programmable resistance elements 30 parallel to each other.

The limitation “fast growth material” is an inherent based on the materials disclosed in Czubatyj. See, for example, column 7, and 8 wherein Czubatyj discloses multiple memory materials which are similar to the materials disclosed on page 14, and tables on pages 20-22 of

applicant's specification. Further, the claims are interpreted in light of the specification, therefore, the limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F. 2d 1181, 26 USPQ 2d 1057 (Fed. Cir. 1993). Therefore, such a description that uses a qualitative adjective such as "fast" in the limitation "fast growth material" is open to interpretation because it is not known what level of growth can be considered "fast" because the metes and bounds of the term "fast" are not defined in the claims.

***Allowable Subject Matter***

3. Claims 19-21 are allowed. The following is an examiner's statement of reasons for allowance: The references of record, either singularly or in combination, do not teach or suggest at least an electrical device comprising: a resistor comprising a layer of a phase change material being changeable between a first phase with a first electrical resistivity and a second phase with a second electrical resistivity different from the first electrical resistivity, the resistor being switchable between at least three different electrical resistance values, and the phase change material being a composition of one of: the formula Sb<sub>1-c</sub>M<sub>c</sub>, where 0.05<=c<=0.61, and M is from the group of Ge, In, Ag, Ga, Te, Zn, and Sn, a material including Ge, Ga, or Ge and Ga; and a material that is substantially free of Te.

4. Claims 7, 8, 10-12, 16, and 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

5. Applicant's arguments with respect to claims 1-21 have been considered but are moot in view of the new ground(s) of rejection.

**INFORMATION ON HOW TO CONTACT THE USPTO**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to EUGENE LEE whose telephone number is (571)272-1733. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Parker can be reached on 571-272-2298. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Eugene Lee  
May 28, 2011

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/Eugene Lee/  
Primary Examiner, Art Unit 2815